WHAT IS CLAIMED IS:

1. A system for calculating and communicating probability of precipitation forecasts for periods less than six hours using existing forecasting information, the system comprising:

storage means for storing location-specific probability forecasting information;

processing means for computing a probability of precipitation value from the forecast information for any time period interval, T, in a pre-set time period, t; and

communicating means for communicating the values,

wherein $T < 6$ hours and $t \geq 6$ hours.

2. The system according to claim 1, wherein $T = 3$ hours and $t = 96$ hours.

3. The system according to claim 1, wherein the probability of precipitation values are not fixed to a specific time, but are recalculated to a present time.

4. The system according to claim 1, further comprising manipulation means for allowing a system operator to manually adjust the probability of precipitation value and the most probable precipitation amount value.

5. The system according to claim 1, wherein the storage means is a networked computer containing a digital database containing the forecasting information.

6. The system according to claim 1, wherein the processing means comprises a computer executing a probability forecast model.

7. The system according to claim 1, wherein the communicating means is a computer server connected to a network that generates one or more web pages having the probability of precipitation value and the most probable precipitation amount value upon receiving a request from a remote client connected to the network.

8. The system according to claim 1, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$½ * (\text{POP-}3_X + \text{POP-}3_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-}3_Y = a * (\text{POP-}6_C) + b * (\text{POP-}6_{(C+1)})$$

Where: $0 \leq a \leq 1$ and $0 \leq b \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and POP-$6_{(C+1)}$ is the next consecutive six-hour time interval also already stored in the storage means.

9. The system according to claim 1, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$½ * (\text{POP-}3_X + \text{POP-}3_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-}3_Y = a * (\text{POP-}6_C) + b * (\text{POP-}6_{(C-1)})$$

Where: $0 \leq a \leq 1$ and $0 \leq b \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and POP-$6_{(C-1)}$ is the previous consecutive six-hour time interval also already stored in the storage means.

10. The system according to claim 1, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$½ * (\text{POP-}3_X + \text{POP-}3_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-}3_Y = a * \max (\text{POP-}6_C, \text{POP-}6_{(C-1)})$$

Where: $0 \leq a \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and POP-$6_{(C-1)}$ is the previous consecutive six-hour time interval also already stored in the storage means.

11. The system according to claim 1, wherein in addition to the probability of precipitation forecast, also calculated are probability forecasts for specific types of precipitation, including but not limited to, the probability of rain, the probability of snow, the probability of ice, and the probability of thunderstorms.

12. The system according to claim 1, wherein most probable precipitation amount values are calculated for some or all of the time period intervals T.

13. A system for calculating and communicating probability of precipitation forecasts for periods that are not fixed to specific pre-set times using existing forecasting information, the system comprising:

storage means for storing location-specific probability forecasting information;

processing means for computing a probability of precipitation value from the forecast information for any time period interval, T, in a pre-set time period, t; and

communicating means for communicating the values,

wherein the probability of precipitation value are not fixed to a specific pre-set time, but are recalculated to a present time.

14. The system according to claim 13, wherein $T < 6$ hours and $t \geq 6$ hours.

15. The system according to claim 13, wherein $T = 3$ hours and $t = 96$ hours.

16. The system according to claim 13, further comprising manipulation means for allowing a system operator to manually adjust the probability of precipitation value and the most probable precipitation amount value.

17. The system according to claim 13, wherein the storage means is a networked

17. The system according to claim 13, wherein the storage means is a networked computer containing a digital database containing the forecasting information.

18. The system according to claim 13, wherein the processing means comprises a computer executing a probability forecast model.

19. The system according to claim 13, wherein the communicating means is a computer server connected to a network that generates one or more web pages having the probability of precipitation value and the most probable precipitation amount value upon receiving a request from a remote client connected to the network.

20. The system according to claim 13, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$\frac{1}{2} * (\text{POP-3}_X + \text{POP-3}_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-3}_Y = a * (\text{POP-6}_C) + b * (\text{POP-6}_{(C+1)})$$

Where: $0 \leq a \leq 1$ and $0 \leq b \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and $\text{POP-6}_{(C+1)}$ is the next consecutive six-hour time interval also already stored in the storage means.

21. The system according to claim 13, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$½ * (\text{POP-}3_X + \text{POP-}3_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-}3_Y = a * (\text{POP-}6_C) + b * (\text{POP-}6_{(C-1)})$$

Where: $0 \leq a \leq 1$ and $0 \leq b \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and POP-$6_{(C-1)}$ is the previous consecutive six-hour time interval also already stored in the storage means.

22. The system according to claim 13, wherein the probability of precipitation forecast is the current three-hour probability forecast value determined from:

$$½ * (\text{POP-}3_X + \text{POP-}3_Y),$$

where POP-3_X is a value from between 10 and 90, inclusively, and POP-3_Y is determined from the formula:

$$\text{POP-}3_Y = a * \max (\text{POP-}6_C, \text{POP-}6_{(C-1)})$$

Where: $0 \leq a \leq 1$ and POP-6_C is the six-hour probability of precipitation forecast value for the current six-hour time interval already stored in the storage means and POP-$6_{(C-1)}$ is the previous consecutive six-hour time interval also already stored in the storage means.

23. The system according to claim 13, wherein in addition to the probability of precipitation forecast, also calculated are probability forecasts for specific types of precipitation, including but not limited to, the probability of rain, the probability of snow, the probability of ice, and the probability of thunderstorms.

24. The system according to claim 13, wherein most probable precipitation amount values are calculated for some or all of the time period intervals T.

25. A system for calculating and communicating probability of precipitation forecasts using existing forecasting information, the system comprising:

a probability of precipitation forecast model for computing a probability of precipitation value for a time interval, T, within a pre-set time period, t, wherein $T < 6$ hours and $t \geq 6$ hours;

a most probable precipitation amount forecast model for computing a precipitation amount value corresponding to each probability of precipitation value; and

a communications device for communicating the values electronically to a remote requestor.

26. The system according to claim 25, wherein $T = 3$ hours and $t = 96$ hours.

27. The system according to claim 25, wherein the probability of precipitation value are not fixed to a specific time, but are recalculated to the present time.

28. The system according to claim 25, wherein in addition to the probability of precipitation forecast, also calculated are probability forecasts for specific types of precipitation, including but not limited to, the probability of rain, the probability of snow, the probability of ice, and the probability of thunderstorms.

29. The system according to claim 25, wherein the communications device is a network server connected to the Internet having a web page generator for sending web content in response to a request from a client computer connected to the Internet.

30. The system according to claim 25, wherein the communications device is one of a wired or wireless telephony system, a pager, radio or television broadcast system and a hardcopy printout.

31. A method of calculating probability of precipitation and most probable amount of precipitation forecasts for selected time periods and locations and communicating the same to end users, comprising the steps of:

(a) storing probability of precipitation values from meteorological forecast models;

(b) calculating a location-specific probability of precipitation value for each consecutive time period intervals, T, contained within the pre-set time period, t;

(c) calculating a most probable precipitation amount corresponding to each of the probability of precipitation values;

(d) calculating a location-specific probability of precipitation value for each t/T

pairs of consecutive probability of precipitation values; and

(e) communicating said location-specific probability of precipitation values for each consecutive time period intervals, T, said most probable precipitation amount, and said probability of precipitation value for each t/T pairs, to an end user.